



# **ATTACHMENT 1**

## **DESCRIPTIONS OF POWER EQUIPMENT**

## DESCRIPTION OF POWER EQUIPMENT

Microprocessor Plant (BUSS BAR) – Telephone central office power is negative 48 volt direct current (-48v dc.). Various components called in a power plant are used to derive the direct current power from commercial alternating current (AC) power. The “microprocessor plant” is a computer chip in the plant controller/monitor unit. “BUSS BAR” refers to the large heavy rectangular copper bars that are used to connect power cables to power boards and storage batteries.

Rectifier – A rectifier changes alternating current to direct current. It also is used to charge/recharge batteries after a commercial power failure.

Batteries – In telephone central offices, 24 cells make a battery string. The battery string provides the direct current power to the network if commercial power fails.

Automatic Breaker – An automatic breaker is a device used to protect network equipment from over-current surges/spikes. The automatic breaker will operate if there is an over-current condition that exceeds the rated capacity of the breaker. When the breaker operates, the flow of current to the equipment is removed thus protecting the equipment from spikes and surges.

Power Distribution Service Cabinet – The PDSC is a cabinet that contains automatic breakers that distribute alternating current to individual rectifiers.

Emergency Engine/Turbine (auto start) – This is an engine which is used to provide alternating current to the power plant if there is a commercial power failure. When a commercial power failure occurs, sensing devices in the office time the length of the outage. After a preset time, the emergency engine will start automatically, with no human intervention. In addition, automatic breakers on the House Service Board will automatically transfer the load from the commercial bus to the emergency bus.

Battery Distribution Fuse Bay – Also called secondary distribution, the BDFB contains fuses or circuit breakers that are used to provide power to network elements. The BDFB is usually placed in areas that are remote from the power plant and close to the equipment that it serves.

Power Plant Distribution Bay – This is sometimes called the power board. It contains the mounting positions for fuses/circuit breakers that power network elements such as BDFB's.



## **ATTACHMENT 2**

### **2000 DC POWER COST STUDIES**



**VERIZON - SOUTH**

**COLLOCATION DC POWER COST STUDY  
TO SUPPORT THE APRIL 11, 2001 FCC FILING  
TRANSMITTAL NO. 1373  
F.C.C. NO. 1**

**REDACTED VERSION**





**REDACTED DATA - TAB 1:**

**Collocation Power FCC Cost Study Audit Trail: Explains where the prices (which are proprietary) can be found.**

**DC POWER - MONTHLY RATE**  
**Tariff F.C.C. No. 1**  
**Transmittal No. 1373, Workpaper 2-1**

<u>Line</u>	<u>Description</u>	<u>Source</u>	<u>Total</u>
1	Unit Investment	Cost Study	\$801.76
2	Depreciation	Cost Study	\$43.54
3	Cost of Capital	Cost Study	\$45.71
4	Income Tax	Cost Study	\$23.43
5	Maintenance	Cost Study	\$42.47
6	Administration	Cost Study	\$33.27
7	Other Tax	Cost Study	\$8.96
8	Annual Direct Cost	Sum Lines 2-7	\$197.38
9	Monthly Cost	Line 8/12	\$16.45
10	Overhead Loading Factor	Commission Prescribed	1.23
11	Monthly Rate	Line 9 * Line 10	<b>\$20.23</b>
12	Direct Cost to Rate	Line 9/ Line 11	0.81

**Demand, Costs and Revenues**  
**Tariff F.C.C. No. 1**  
**Transmittal No. 1373, Workpaper 2-2**

	ANNUAL DEMAND (A)	COST (B)	RATE (C)	ANNUAL COSTS (D=A*B)	ANNUAL REVENUES (E=A*C)
<b>DC Power per amp per feed - Monthly Charge</b>					
Physical	81,000	\$ 16.45	\$ 20.23	\$ 1,332,450.00	\$ 1,638,630.00
Virtual	5,400	\$ 16.45	\$ 20.23	\$ 88,830.00	\$ 109,242.00
<b>TOTAL</b>				<b>\$ 1,421,280.00</b>	<b>\$ 1,747,872.00</b>



- WEIGHTED -

[illegible]

[illegible]

PHYSICAL COLLOCATION  
VERIZON: DC, DE, MD, NJ, PA, VA & WV  
FCC - 1

DC POWER - LESS THAN OR EQUAL TO 60 AMPS

	A	B	C	D	E	F	G	H	I
LINE NO.	ITEM	SOURCE	DEPRECIATION	COST OF CAPITAL	INCOME TAX	MAINT.	ADMIN.	OTHER TAXES	TOTAL
1	WASHINGTON, DC	WP 1.0, PG 1, LINES 2 THRU 7	\$39.90	\$40.66	\$21.50	\$41.23	\$44.62	\$4.67	\$192.58
2	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26C	0.03644	0.03644	0.03644	0.03644	0.03644	0.03644	0.2186
3	BA-DC WEIGHTED COST	LINE 1 X LINE 2	\$1.45	\$1.48	\$0.78	\$1.50	\$1.63	\$0.17	\$7.02
4	DELAWARE	WP 2.0, PG 1, LINES 2 THRU 7	\$45.75	\$48.11	\$24.75	\$52.93	\$24.25	\$7.04	\$202.82
5	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26D	0.02566	0.02566	0.02566	0.02566	0.02566	0.02566	0.1540
6	BA-DE WEIGHTED COST	LINE 4 X LINE 5	\$1.17	\$1.23	\$0.64	\$1.36	\$0.62	\$0.18	\$5.20
7	MARYLAND	WP 3.0, PG 1, LINES 2 THRU 7	\$45.67	\$45.33	\$22.28	\$37.46	\$34.32	\$14.00	\$199.06
8	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26E	0.16245	0.16245	0.16245	0.16245	0.16245	0.16245	0.9747
9	BA-MD WEIGHTED COST	LINE 7 X LINE 8	\$7.42	\$7.36	\$3.62	\$6.09	\$5.57	\$2.27	\$32.34
10	NEW JERSEY	WP 4.0, PG 1, LINES 2 THRU 7	\$39.18	\$43.83	\$22.72	\$41.88	\$32.96	\$9.46	\$190.03
11	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26F	0.29196	0.29196	0.29196	0.29196	0.29196	0.29196	1.7518
12	BA-NJ WEIGHTED COST	LINE 10 X LINE 11	\$11.44	\$12.80	\$6.63	\$12.23	\$9.62	\$2.76	\$55.48
13	PENNSYLVANIA	WP 5.0, PG 1, LINES 2 THRU 7	\$46.02	\$46.43	\$24.74	\$43.33	\$32.73	\$7.38	\$200.65
14	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26G	0.29019	0.29019	0.29019	0.29019	0.29019	0.29019	1.7411
15	BA-PA WEIGHTED COST	LINE 13 X LINE 14	\$13.35	\$13.47	\$7.18	\$12.57	\$9.50	\$2.14	\$58.23
16	VIRGINIA	WP 6.0, PG 1, LINES 2 THRU 7	\$41.29	\$44.97	\$21.52	\$40.43	\$30.65	\$6.38	\$185.25
17	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26H	0.15549	0.15549	0.15549	0.15549	0.15549	0.15549	0.9329
18	BA-VA WEIGHTED COST	LINE 10 X LINE 11	\$6.42	\$6.99	\$3.35	\$6.29	\$4.77	\$0.99	\$28.80
19	WEST VIRGINIA	WP 7.0, PG 1, LINES 2 THRU 7	\$57.53	\$60.05	\$31.14	\$61.83	\$39.03	\$11.14	\$260.73
20	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26I	0.03782	0.03782	0.03782	0.03782	0.03782	0.03782	0.2269
21	BA-WV WEIGHTED COST	LINE 13 X LINE 14	\$2.18	\$2.27	\$1.18	\$2.34	\$1.48	\$0.42	\$9.86

PHYSICAL COLLOCATION  
VERIZON: DC, DE, MD, NJ, PA, VA & WV  
FCC - 1

DC POWER - GREATER THAN 60 AMPS

	A	B	C	D	E	F	G	H	I
LINE NO.	ITEM	SOURCE	DEPRECIATION	COST OF CAPITAL	INCOME TAX	MAINT.	ADMIN.	OTHER TAXES	TOTAL
1	WASHINGTON, DC	WP 1.1, PG 1, LINES 2 THRU 7	\$39.85	\$40.60	\$21.47	\$41.18	\$44.56	\$4.66	\$192.33
2	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26C	0.03644	0.03644	0.03644	0.03644	0.03644	0.03644	0.21864
3	BA-DC WEIGHTED COST	LINE 1 X LINE 2	\$1.45	\$1.48	\$0.78	\$1.50	\$1.62	\$0.17	\$7.01
4	DELAWARE	WP 2.1, PG 1, LINES 2 THRU 7	\$46.08	\$48.46	\$24.93	\$53.31	\$24.42	\$7.09	\$204.29
5	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26D	0.02566	0.02566	0.02566	0.02566	0.02566	0.02566	0.1540
6	BA-DE WEIGHTED COST	LINE 4 X LINE 5	\$1.18	\$1.24	\$0.64	\$1.37	\$0.63	\$0.18	\$5.24
7	MARYLAND	WP 3.1, PG 1, LINES 2 THRU 7	\$46.11	\$45.77	\$22.49	\$37.82	\$34.65	\$14.13	\$200.98
8	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26E	0.16245	0.16245	0.16245	0.16245	0.16245	0.16245	0.9747
9	BA-MD WEIGHTED COST	LINE 7 X LINE 8	\$7.49	\$7.43	\$3.65	\$6.14	\$5.63	\$2.30	\$32.65
10	NEW JERSEY	WP 4.1, PG 1, LINES 2 THRU 7	\$39.35	\$44.03	\$22.82	\$42.06	\$33.11	\$9.50	\$190.86
11	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26F	0.29196	0.29196	0.29196	0.29196	0.29196	0.29196	1.7518
12	BA-NJ WEIGHTED COST	LINE 10 X LINE 11	\$11.49	\$12.85	\$6.66	\$12.28	\$9.87	\$2.77	\$55.72
13	PENNSYLVANIA	WP 5.1, PG 1, LINES 2 THRU 7	\$46.44	\$46.86	\$24.97	\$43.72	\$33.03	\$7.45	\$202.48
14	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26G	0.29019	0.29019	0.29019	0.29019	0.29019	0.29019	1.7411
15	BA-PA WEIGHTED COST	LINE 13 X LINE 14	\$13.48	\$13.60	\$7.25	\$12.69	\$9.59	\$2.16	\$58.76
16	VIRGINIA	WP 6.1, PG 1, LINES 2 THRU 7	\$41.68	\$45.39	\$21.72	\$40.81	\$30.94	\$6.44	\$186.97
17	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26H	0.15549	0.15549	0.15549	0.15549	0.15549	0.15549	0.9329
18	BA-VA WEIGHTED COST	LINE 10 X LINE 11	\$6.48	\$7.06	\$3.38	\$6.35	\$4.81	\$1.00	\$29.07
19	WEST VIRGINIA	WP 7.1, PG 1, LINES 2 THRU 7	\$58.68	\$61.25	\$31.76	\$63.06	\$39.81	\$11.36	\$265.92
20	BA-SOUTH WEIGHTING	WP 8.0, PG 1, LINE 26I	0.03782	0.03782	0.03782	0.03782	0.03782	0.03782	0.2269
21	BA-WV WEIGHTED COST	LINE 13 X LINE 14	\$2.22	\$2.32	\$1.20	\$2.39	\$1.51	\$0.43	\$10.06



PHYSICAL COLLOCATION  
Verizon - Washington, DC  
FCC - 1

DC POWER - LESS THAN OR EQUAL TO 60 AMPS

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>CKT.EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL UNIT INVESTMENT	WP 1.0, PG 2 LINE 10	\$5.65	\$93.90	\$616.64	\$716.19
2 DEPRECIATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.00	\$1.55	\$38.36	\$39.90
3 COST OF MONEY	LINE 1 X WP 8.0 - ACF FACTOR	\$0.64	\$8.08	\$31.94	\$40.66
4 INCOME TAX	LINE 1 X WP 8.0 - ACF FACTOR	\$0.34	\$4.26	\$16.90	\$21.50
5 MAINTENANCE	LINE 1 X WP 8.0 - ACF FACTOR	\$0.05	\$0.85	\$40.33	\$41.23
6 ADMINISTRATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.35	\$5.85	\$38.42	\$44.62
7 OTHER TAX	LINE 1 X WP 8.0 - ACF FACTOR	<u>\$0.16</u>	<u>\$2.60</u>	<u>\$1.91</u>	<u>\$4.67</u>
8 ANNUAL DIRECT COST	SUM (LINE 2 THRU LINE 7)	\$1.54	\$23.19	\$167.85	\$192.58
9 WEIGHTED UNIT INVESTMENT	LINE 8 x WP 8.0, PG 1, LINE 26C	\$0.06	\$0.85	\$6.12	\$7.02

**PHYSICAL COLLOCATION**  
**Verizon - Washington, DC**  
**FCC - 1**

**DC POWER - LESS THAN OR EQUAL TO 60 AMPS**

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>SWITCH EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL POWER PLANT UNIT INVESTMENT	WP 1.0, PG 3, LINE 10	-	-	\$221.40	\$221.40
2 EF&I FACTOR - FRC 377C	WP 8.0, PG 1, LINE 24C	-	-	2.7852	2.7852
3 INSTALLED INVESTMENT (NRC)	LINE 1 x LINE 2	-	-	\$616.64	\$616.64
4 UTILIZATION FACTOR	ENGINEERING	-	-	1.0000	1.0000
5 TOTAL IN-PLACE INVESTMENT	LINE 3 x LINE 4	-	-	\$616.64	\$616.64
6 LAND INVESTMENT FACTOR	WP 8.0, PG 1, LINE 22C	0.0092	-	-	0.0092
7 BUILDING INVESTMENT FACTOR	WP 8.0, PG 1, LINE 23C	-	0.1523	-	0.1523
8 LAND INVESTMENT	LINE 5E x LINE 6C	\$5.65	-	-	\$5.65
9 BUILDING INVESTMENT	LINE 5E x LINE 7D	-	\$93.90	-	\$93.90
10 TOTAL UNIT INVESTMENT	LINE 5E + LINE 8C + LINE 9D	\$5.65	\$93.90	\$616.64	\$716.19
11 WEIGHTED UNIT INVESTMENT	INE 10 x WP 6.0, PG 1, LINE 26C	\$0.21	\$3.42	\$22.47	\$26.10

**PHYSICAL COLLOCATION**  
**Verizon - Washington, DC**  
**FCC NO. 1**

**DC POWER COST DEVELOPMENT - LESS THAN OR EQUAL TO 60 AMPS**

LINE NO.	A ITEM	B SOURCE	C METRO	D URBAN	E SUBURBAN
	<u>Microprocessor Plant (BUSS BAR)</u>				
1	AMP	Engineering	5,000	2,600	2,600
2	Material	Engineering	\$27,154	\$23,879	\$23,879
3	Unit Investment Per AMP	(L2 / L1)	\$5.43	\$9.18	\$9.18
4	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
5	Statewide Unit Investment Per AMP	<b>\$6.94</b>	\$3.25	\$3.44	\$0.25
	<u>Rectifiers</u>				
6	Quantity	Engineering	6	6	6
7	AMPS per unit	Engineering	400	200	200
8	Tot. AMPS	(L6 * L7)	2,400	1,200	1,200
9	Utilization	(L6-1) / L6)	83.33%	83.33%	83.33%
10	Material	Engineering	\$55,502	\$42,046	\$42,046
11	Total Investment	(L10 / L9)	\$66,602	\$50,455	\$50,455
12	Unit Investment Per AMP	(L11 / L8)	\$27.75	\$42.05	\$42.05
13	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
14	Statewide Unit Investment Per AMP	<b>\$33.49</b>	\$16.60	\$15.77	\$1.13
	<u>Batteries</u>				
15	Strings	Engineering	3	3	3
16	AMPS per String	Engineering	688	310	310
17	Tot. AMPS	(L15 * L16)	2,064	930	930
18	Total Investment	Engineering	\$80,952	\$34,965	\$34,965
19	Unit Investment Per AMP	(L18 / L17)	\$39.22	\$37.60	\$37.60
20	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
21	Statewide Unit Investment Per AMP	<b>\$38.57</b>	\$23.46	\$14.10	\$1.01
	<u>Automatic Breaker</u>				
22	AMP per Breaker	Engineering	1,600	1,200	800
23	Total Investment	Engineering	\$50,000	\$40,000	\$35,000
24	Unit Investment Per AMP	(L23 / L22)	\$31.25	\$33.33	\$43.75
25	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
26	Statewide Unit Investment Per AMP	<b>\$32.37</b>	\$18.69	\$12.50	\$1.17
	<u>Power Distribution Service Cabinet</u>				
27	Amps	Engineering	1,600	800	400
28	Material	Engineering	\$13,976	\$7,788	\$5,677
29	Unit Investment Per AMP	(L28 / L27)	\$8.74	\$9.74	\$14.19
30	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
31	Statewide Unit Investment Per AMP	<b>\$9.26</b>	\$5.23	\$3.65	\$0.38
	<u>Emergency engine/turbine (auto start)</u>				
32	AMP Capacity	Engineering	2,605	1,736	1,111
33	Utilization	Engineering	70%	70%	70%
34	Utilized AMPS	(L32 * L33)	1,824	1,215	778
35	Emerg. Engine Invest.	Engineering	\$130,765	\$78,249	\$53,871
36	Conduit/Emer Lights	Engineering	\$45,629	\$30,487	\$23,332
37	Total Investment	(L35 + L36)	\$176,394	\$108,736	\$77,203
38	Unit Investment Per AMP	(L37 / L34)	\$96.73	\$89.48	\$99.27
39	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
40	Statewide Unit Investment Per AMP	<b>\$94.08</b>	\$57.87	\$33.55	\$2.66
	<u>Battery Distribution Fuse Bay</u>				
41	AMP Capacity	Engineering	800	800	800
42	Material	Engineering	\$5,355	\$5,355	\$5,355
43	Unit Investment Per AMP	(L42 / L41)	\$6.69	\$6.69	\$6.69
44	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
45	Statewide Unit Investment Per AMP	<b>\$6.69</b>	\$4.00	\$2.51	\$0.18
46	<u>Total Unit Investment - (Less than or Equal to 60 AMP's) - Sum Lines (5C+14C+21C+26C+31C+40C+45C)</u>		<b>\$221.40</b>		

**PHYSICAL COLLOCATION**  
**Verizon - Washington, DC**  
**FCC - 1**

**DC POWER - GREATER THAN 60 AMPS**

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>CKT EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL UNIT INVESTMENT	WP 1.1, PG 2 LINE 10	\$5.64	\$93.78	\$615.86	\$715.28
2 DEPRECIATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.00	\$1.55	\$38.31	\$39.85
3 COST OF MONEY	LINE 1 X WP 8.0 - ACF FACTOR	\$0.64	\$8.06	\$31.90	\$40.60
4 INCOME TAX	LINE 1 X WP 8.0 - ACF FACTOR	\$0.34	\$4.26	\$16.87	\$21.47
5 MAINTENANCE	LINE 1 X WP 8.0 - ACF FACTOR	\$0.05	\$0.85	\$40.28	\$41.18
6 ADMINISTRATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.35	\$5.84	\$38.37	\$44.56
7 OTHER TAX	LINE 1 X WP 8.0 - ACF FACTOR	<u>\$0.16</u>	<u>\$2.60</u>	<u>\$1.91</u>	<u>\$4.66</u>
8 ANNUAL DIRECT COST	SUM (LINE 2 THRU LINE 7)	\$1.54	\$23.16	\$167.64	\$192.33
9 WEIGHTED UNIT INVESTMENT	LINE 8 x WP 8.0, PG 1, LINE 26C	\$0.06	\$0.84	\$6.11	\$7.01

**PHYSICAL COLLOCATION**  
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**DC POWER - GREATER THAN 60 AMPS**

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>SWITCH EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL POWER PLANT UNIT INVESTMENT	WP 1.1, PG 3, LINE 10	-	-	\$221.12	\$221.12
2 EF&I FACTOR - FRC 377C	WP 8.0, PG 1, LINE 24C	-	-	2.7852	2.7852
3 INSTALLED INVESTMENT (NRC)	LINE 1 x LINE 2	-	-	\$615.86	\$615.86
4 UTILIZATION FACTOR	ENGINEERING	-	-	1.0000	1.0000
5 TOTAL IN-PLACE INVESTMENT	LINE 3 x LINE 4	-	-	\$615.86	\$615.86
6 LAND INVESTMENT FACTOR	WP 8.0, PG 1, LINE 22C	0.0092	-	-	0.0092
7 BUILDING INVESTMENT FACTOR	WP 8.0, PG 1, LINE 23C	-	0.1523	-	0.1523
8 LAND INVESTMENT	LINE 5E x LINE 6C	\$5.64	-	-	\$5.64
9 BUILDING INVESTMENT	LINE 5E x LINE 7D	-	\$93.78	-	\$93.78
10 TOTAL UNIT INVESTMENT	LINE 5E + LINE 8C + LINE 9D	\$5.64	\$93.78	\$615.86	\$715.28
11 WEIGHTED UNIT INVESTMENT	INE 10 x WP 6.0, PG 1, LINE 26C	\$0.21	\$3.42	\$22.44	\$26.06

PHYSICAL COLLOCATION  
Verizon - Washington, DC  
FCC NO. 1

DC POWER COST DEVELOPMENT - GREATER THAN 60 AMPS

LINE NO.	A ITEM	B SOURCE	C METRO	D URBAN	E SUBURBAN
	<u>Microprocessor Plant (BUSS BAR)</u>				
1	AMP	Engineering	5,000	2,600	2,600
2	Material	Engineering	\$27,154	\$23,879	\$23,879
3	Unit Investment Per AMP	(L2 / L1)	\$5.43	\$9.18	\$9.18
4	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
5	Statewide Unit Investment Per AMP		\$6.94	\$3.25	\$3.44
	<u>Rectifiers</u>				
6	Quantity	Engineering	6	6	6
7	AMPS per unit	Engineering	400	200	200
8	Tot. AMPS	(L6 * L7)	2,400	1,200	1,200
9	Utilization	(L6-1) / L6)	83.33%	83.33%	83.33%
10	Material	Engineering	\$55,502	\$42,046	\$42,046
11	Total Investment	(L10 / L9)	\$66,602	\$50,455	\$50,455
12	Unit Investment Per AMP	(L11 / L8)	\$27.75	\$42.05	\$42.05
13	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
14	Statewide Unit Investment Per AMP		\$33.49	\$16.60	\$15.77
	<u>Batteries</u>				
15	Strings	Engineering	3	3	3
16	AMPS per String	Engineering	688	310	310
17	Tot. AMPS	(L15 * L16)	2,064	930	930
18	Total Investment	Engineering	\$80,952	\$34,965	\$34,965
19	Unit Investment Per AMP	(L18 / L17)	\$39.22	\$37.60	\$37.60
20	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
21	Statewide Unit Investment Per AMP		\$38.57	\$23.46	\$14.10
	<u>Automatic Breaker</u>				
22	AMP per Breaker	Engineering	1,600	1,200	800
23	Total Investment	Engineering	\$50,000	\$40,000	\$35,000
24	Unit Investment Per AMP	(L23 / L22)	\$31.25	\$33.33	\$43.75
25	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
26	Statewide Unit Investment Per AMP		\$32.37	\$18.69	\$12.50
	<u>Power Distribution Service Cabinet</u>				
27	Amps	Engineering	1,600	800	400
28	Material	Engineering	\$13,976	\$7,788	\$5,677
29	Unit Investment Per AMP	(L28 / L27)	\$8.74	\$9.74	\$14.19
30	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
31	Statewide Unit Investment Per AMP		\$9.26	\$5.23	\$3.65
	<u>Emergency engine/turbine (auto start)</u>				
32	AMP Capacity	Engineering	2,605	1,736	1,111
33	Utilization	Engineering	70%	70%	70%
34	Utilized AMPS	(L32 * L33)	1,824	1,215	778
35	Emerg. Engine Invest.	Engineering	\$130,765	\$78,249	\$53,871
36	Conduit/Emer Lights	Engineering	\$45,629	\$30,487	\$23,332
37	Total Investment	(L35 + L36)	\$176,394	\$108,736	\$77,203
38	Unit Investment Per AMP	(L37 / L34)	\$96.73	\$89.48	\$99.27
39	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
40	Statewide Unit Investment Per AMP		\$94.08	\$57.87	\$33.55
	<u>Power Plant Distribution Bay</u>				
41	AMP Capacity	Engineering	2,600	1,200	1,200
42	Material	Engineering	\$12,747	\$10,388	\$10,388
43	Unit Investment Per AMP	(L42 / L41)	\$4.90	\$8.66	\$8.66
44	Statewide Weighting	WP 8.0, Col C, Lns 27-30	0.5982	0.3750	0.0268
45	Statewide Unit Investment Per AMP		\$6.41	\$2.93	\$3.25
	<u>Total Unit Investment - (Greater than 60</u>				
41	AMPs) -Sum Lines		\$221.12		
	(5C+14C+21C+28C+31C+40C + 45C)				

PHYSICAL COLLOCATION  
Verizon - Delaware  
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DC POWER - LESS THAN OR EQUAL TO 60 AMPS

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>CKT EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL UNIT INVESTMENT	WP 2.0, PG 2 LINE 10	\$6.47	\$137.48	\$689.35	\$833.30
2 DEPRECIATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.00	\$2.94	\$42.81	\$45.75
3 COST OF MONEY	LINE 1 X WP 8.0 - ACF FACTOR	\$0.73	\$11.47	\$35.92	\$48.11
4 INCOME TAX	LINE 1 X WP 8.0 - ACF FACTOR	\$0.38	\$5.90	\$18.47	\$24.75
5 MAINTENANCE	LINE 1 X WP 8.0 - ACF FACTOR	\$0.17	\$3.67	\$49.08	\$52.93
6 ADMINISTRATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.19	\$4.00	\$20.06	\$24.25
7 OTHER TAX	LINE 1 X WP 8.0 - ACF FACTOR	<u>\$0.12</u>	<u>\$2.64</u>	<u>\$4.27</u>	<u>\$7.04</u>
8 ANNUAL DIRECT COST	SUM (LINE 2 THRU LINE 7)	\$1.59	\$30.62	\$170.61	\$202.82
9 WEIGHTED UNIT INVESTMENT	LINE 8 x WP 8.0, PG 1, LINE 26D	\$0.04	\$0.79	\$4.38	\$5.20

**PHYSICAL COLLOCATION**  
**Verizon - Delaware**  
**FCC - 1**

**DC POWER - LESS THAN OR EQUAL TO 60 AMPS**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b><u>ITEM</u></b>	<b><u>SOURCE</u></b>	<b><u>LAND</u></b>	<b><u>BLDG</u></b>	<b><u>SWITCH EQPT.</u></b>	<b><u>TOTAL INVEST</u></b>
1 TOTAL POWER PLANT UNIT INVESTMENT	WP 2.0, PG 3, LINE 10	-	-	\$247.50	\$247.50
2 EF&I FACTOR - FRC 377C	WP 8.0, PG 1, LINE 24D	-	-	2.7852	2.7852
3 INSTALLED INVESTMENT (NRC)	LINE 1 x LINE 2	-	-	\$689.35	\$689.35
4 UTILIZATION FACTOR	ENGINEERING	-	-	1.0000	1.0000
5 TOTAL IN-PLACE INVESTMENT	LINE 3 x LINE 4	-	-	\$689.35	\$689.35
6 LAND INVESTMENT FACTOR	WP 8.0, PG 1, LINE 22D	0.0094	-	-	0.0094
7 BUILDING INVESTMENT FACTOR	WP 8.0, PG 1, LINE 23D	-	0.1994	-	0.1994
8 LAND INVESTMENT	LINE 5E x LINE 6C	\$6.47		-	\$6.47
9 BUILDING INVESTMENT	LINE 5E x LINE 7D	-	\$137.48	-	\$137.48
10 TOTAL UNIT INVESTMENT	LINE 5E + LINE 8C + LINE 9D	\$6.47	\$137.48	\$689.35	\$833.30
11 WEIGHTED UNIT INVESTMENT	INE 10 x WP 8.0, PG 1, LINE 26D	\$0.17	\$3.53	\$17.69	\$21.38



**PHYSICAL COLLOCATION**  
**Verizon - Delaware**  
**FCC NO. 1**

**DC POWER COST DEVELOPMENT - LESS THAN OR EQUAL TO 60 AMPS**

LINE NO.	A ITEM	B SOURCE	C METRO	D URBAN	E SUBURBAN	F RURAL
	<b>Microprocessor Plant (BUSS BAR)</b>					
1	AMP	Engineering	5,000	2,600	2,600	600
2	Material	Engineering	\$27,154	\$23,879	\$23,879	\$18,349
3	Unit Investment Per AMP	(L2 / L1)	\$5.43	\$9.18	\$9.18	\$30.58
4	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
5	Statewide Unit Investment Per AMP		\$10.63	\$1.64	\$2.76	\$2.53
	<b>Rectifiers</b>					
6	Quantity	Engineering	6	6	6	7
7	AMPS per unit	Engineering	400	200	200	50
8	Tot. AMPS	(L6 * L7)	2,400	1,200	1,200	350
9	Utilization	(L6-1) / L6	83.33%	83.33%	83.33%	85.71%
10	Material	Engineering	\$55,502	\$42,046	\$42,046	\$15,900
11	Total Investment	(L10 / L9)	\$66,602	\$50,455	\$50,455	\$18,550
12	Unit Investment Per AMP	(L11 / L8)	\$27.75	\$42.05	\$42.05	\$53.00
13	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
14	Statewide Unit Investment Per AMP		\$39.05	\$8.40	\$12.65	\$11.60
	<b>Batteries</b>					
15	Strings	Engineering	3	3	3	2
16	AMPS per String	Engineering	688	310	310	310
17	Tot. AMPS	(L15 * L16)	2,064	930	930	620
18	Total Investment	Engineering	\$80,952	\$34,965	\$34,965	\$23,310
19	Unit Investment Per AMP	(L18 / L17)	\$39.22	\$37.60	\$37.60	\$37.60
20	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
21	Statewide Unit Investment Per AMP		\$38.09	\$11.87	\$11.31	\$10.37
	<b>Automatic Breaker</b>					
22	AMP per Breaker	Engineering	1,600	1,200	800	400
23	Total Investment	Engineering	\$50,000	\$40,000	\$35,000	\$20,000
24	Unit Investment Per AMP	(L23 / L22)	\$31.25	\$33.33	\$43.75	\$50.00
25	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
26	Statewide Unit Investment Per AMP		\$37.59	\$9.46	\$10.03	\$12.07
	<b>Power Distribution Service Cabinet</b>					
27	Amps	Engineering	1,600	800	400	400
28	Material	Engineering	\$13,976	\$7,788	\$5,677	\$3,467
29	Unit Investment Per AMP	(L28 / L27)	\$8.74	\$9.74	\$14.19	\$8.67
30	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
31	Statewide Unit Investment Per AMP		\$10.53	\$2.64	\$2.93	\$3.92
	<b>Emergency engine/turbine (auto start)</b>					
32	AMP Capacity	Engineering	2,605	1,736	1,111	434
33	Utilization	Engineering	70%	70%	70%	70%
34	Utilized AMPS	(L32 * L33)	1,824	1,215	778	304
35	Emerg. Engine Invest.	Engineering	\$130,765	\$78,249	\$53,871	\$41,874
36	Conduit/Emer Lights	Engineering	\$45,629	\$30,487	\$23,332	\$11,810
37	Total Investment	(L35 + L36)	\$176,394	\$108,736	\$77,203	\$53,684
38	Unit Investment Per AMP	(L37 / L34)	\$96.73	\$89.48	\$89.27	\$176.71
39	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
40	Statewide Unit Investment Per AMP		\$104.91	\$29.28	\$26.92	\$27.39
	<b>Battery Distribution Fuse Bay</b>					
41	AMP Capacity	Engineering	800	800	800	800
42	Material	Engineering	\$5,355	\$5,355	\$5,355	\$5,355
43	Unit Investment Per AMP	(L42 / L41)	\$6.69	\$6.69	\$6.69	\$6.69
44	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
45	Statewide Unit Investment Per AMP		\$6.69	\$2.03	\$2.01	\$1.85
46	<b>Total Unit Investment - (Less than or Equal to 60 AMP's) - Sum Lines (5C+14C+21C+28C+31C+40C+45C)</b>		\$247.50			

**PHYSICAL COLLOCATION**  
**Verizon - Delaware**  
**FCC - 1**

**DC POWER - GREATER THAN 60 AMPS**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b><u>ITEM</u></b>	<b><u>SOURCE</u></b>	<b><u>LAND</u></b>	<b><u>BLDG</u></b>	<b><u>CKT EQPT.</u></b>	<b><u>TOTAL INVEST</u></b>
1 TOTAL UNIT INVESTMENT	WP 2.0, PG 2 LINE 10	\$6.52	\$138.48	\$694.34	\$839.33
2 DEPRECIATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.00	\$2.96	\$43.12	\$46.08
3 COST OF MONEY	LINE 1 X WP 8.0 - ACF FACTOR	\$0.74	\$11.55	\$36.17	\$48.46
4 INCOME TAX	LINE 1 X WP 8.0 - ACF FACTOR	\$0.38	\$5.94	\$18.61	\$24.93
5 MAINTENANCE	LINE 1 X WP 8.0 - ACF FACTOR	\$0.17	\$3.70	\$49.44	\$53.31
6 ADMINISTRATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.19	\$4.03	\$20.21	\$24.42
7 OTHER TAX	LINE 1 X WP 8.0 - ACF FACTOR	<u>\$0.13</u>	<u>\$2.66</u>	<u>\$4.30</u>	<u>\$7.09</u>
8 ANNUAL DIRECT COST	SUM (LINE 2 THRU LINE 7)	\$1.60	\$30.84	\$171.85	\$204.29
9 WEIGHTED UNIT INVESTMENT	LINE 8 x WP 8.0, PG 1, LINE 26D	\$0.04	\$0.79	\$4.41	\$5.24

PHYSICAL COLLOCATION  
Verizon - Delaware  
FCC - 1

DC POWER - GREATER THAN 60 AMPS

<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>
<u>ITEM</u>	<u>SOURCE</u>	<u>LAND</u>	<u>BLDG</u>	<u>SWITCH EQPT.</u>	<u>TOTAL INVEST</u>
1 TOTAL POWER PLANT UNIT INVESTMENT	WP 2.0, PG 3, LINE 10	-	-	\$249.29	\$249.29
2 EF&I FACTOR - FRC 377C	WP 8.0, PG 1, LINE 24D	-	-	2.7852	2.7852
3 INSTALLED INVESTMENT (NRC)	LINE 1 x LINE 2	-	-	\$694.34	\$694.34
4 UTILIZATION FACTOR	ENGINEERING	-	-	1.0000	1.0000
5 TOTAL IN-PLACE INVESTMENT	LINE 3 x LINE 4	-	-	\$694.34	\$694.34
6 LAND INVESTMENT FACTOR	WP 8.0, PG 1, LINE 22D	0.0094	-	-	0.0094
7 BUILDING INVESTMENT FACTOR	WP 8.0, PG 1, LINE 23D	-	0.1994	-	0.1994
8 LAND INVESTMENT	LINE 5E x LINE 6C	\$6.52	-	-	\$6.52
9 BUILDING INVESTMENT	LINE 5E x LINE 7D	-	\$138.48	-	\$138.48
10 TOTAL UNIT INVESTMENT	LINE 5E + LINE 8C + LINE 9D	\$6.52	\$138.48	\$694.34	\$839.33
11 WEIGHTED UNIT INVESTMENT	INE 10 x WP 8.0, PG 1, LINE 26D	\$0.17	\$3.55	\$17.82	\$21.54

**PHYSICAL COLLOCATION**  
**Verizon - Delaware**  
**FCC NO. 1**

**DC POWER - GREATER THAN 60 AMPS**

LINE NO.	ITEM	SOURCE	METRO	URBAN	SUBURBAN	RURAL
<u>Microprocessor Plant (BUSS BAR)</u>						
1	AMP	Engineering	5,000	2,600	2,600	600
2	Material	Engineering	\$27,154	\$23,879	\$23,879	\$18,349
3	Unit Investment Per AMP	(L2 / L1)	\$5.43	\$9.18	\$9.18	\$30.58
4	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
5	Statewide Unit Investment Per AMP		\$10.63	\$1.64	\$2.53	\$3.69
<u>Rectifiers</u>						
6	Quantity	Engineering	6	6	6	7
7	AMPS per unit	Engineering	400	200	200	50
8	Tot. AMPS	(L6 * L7)	2,400	1,200	1,200	350
9	Utilization	(L6-1) / L6)	83.33%	83.33%	83.33%	85.71%
10	Material	Engineering	\$55,502	\$42,046	\$42,046	\$15,900
11	Total Investment	(L10 / L9)	\$66,602	\$50,455	\$50,455	\$18,550
12	Unit Investment Per AMP	(L11 / L8)	\$27.75	\$42.05	\$42.05	\$53.00
13	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
14	Statewide Unit Investment Per AMP		\$39.05	\$8.40	\$11.60	\$6.40
<u>Batteries</u>						
15	Strings	Engineering	3	3	3	2
16	AMPS per String	Engineering	688	310	310	310
17	Tot. AMPS	(L15 * L16)	2,064	930	930	620
18	Total Investment	Engineering	\$80,952	\$34,965	\$34,965	\$23,310
19	Unit Investment Per AMP	(L18 / L17)	\$39.22	\$37.60	\$37.60	\$37.60
20	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
21	Statewide Unit Investment Per AMP		\$38.09	\$11.87	\$10.37	\$4.54
<u>Automatic Breaker</u>						
22	AMP per Breaker	Engineering	1,600	1,200	800	400
23	Total Investment	Engineering	\$50,000	\$40,000	\$35,000	\$20,000
24	Unit Investment Per AMP	(L23 / L22)	\$31.25	\$33.33	\$43.75	\$50.00
25	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
26	Statewide Unit Investment Per AMP		\$37.59	\$9.46	\$12.07	\$6.04
<u>Power Distribution Service Cabinet</u>						
27	Amps	Engineering	1,600	800	400	400
28	Material	Engineering	\$13,976	\$7,788	\$5,677	\$3,467
29	Unit Investment Per AMP	(L28 / L27)	\$8.74	\$9.74	\$14.19	\$8.67
30	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
31	Statewide Unit Investment Per AMP		\$10.53	\$2.64	\$3.92	\$1.05
<u>Emergency engine/turbine (auto start)</u>						
32	AMP Capacity	Engineering	2,605	1,736	1,111	434
33	Utilization	Engineering	70%	70%	70%	70%
34	Utilized AMPS	(L32 * L33)	1,824	1,215	778	304
35	Emerg. Engine Invest.	Engineering	\$130,765	\$78,249	\$53,871	\$41,874
36	Conduit/Emer Lights	Engineering	\$45,629	\$30,487	\$23,332	\$11,810
37	Total Investment	(L35 + L36)	\$176,394	\$108,736	\$77,203	\$53,684
38	Unit Investment Per AMP	(L37 / L34)	\$96.73	\$89.48	\$99.27	\$176.71
39	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
40	Statewide Unit Investment Per AMP		\$104.91	\$29.28	\$27.39	\$21.33
<u>Power Plant Distribution Bay</u>						
41	AMP Capacity	Engineering	2,600	1,200	1,200	300
42	Material	Engineering	\$12,747	\$10,388	\$10,388	\$4,993
43	Unit Investment Per AMP	(L42 / L41)	\$4.90	\$8.66	\$8.66	\$16.64
44	Statewide Weighting	WP 8.0, Col D, Lns 27-30	0.3027	0.3008	0.2759	0.1207
45	Statewide Unit Investment Per AMP		\$8.49	\$1.48	\$2.39	\$2.01
<u>Total Unit Investment - (Less than or Equal to 60 AMP's) - Sum Lines (5C+14C+21C+26C+31C+40C+45C)</u>						
46			\$249.29			

**PHYSICAL COLLOCATION**  
**Verizon - Maryland**  
**FCC - 1**

**DC POWER - LESS THAN OR EQUAL TO 60 AMPS**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b><u>ITEM</u></b>	<b><u>SOURCE</u></b>	<b><u>LAND</u></b>	<b><u>BLDG</u></b>	<b><u>CKT EQPT.</u></b>	<b><u>TOTAL INVEST</u></b>
1 TOTAL UNIT INVESTMENT	WP 3.0, PG 2 LINE 10	\$5.40	\$101.82	\$692.71	\$799.93
2 DEPRECIATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.00	\$2.24	\$43.43	\$45.67
3 COST OF MONEY	LINE 1 X WP 8.0 - ACF FACTOR	\$0.61	\$8.49	\$36.23	\$45.33
4 INCOME TAX	LINE 1 X WP 8.0 - ACF FACTOR	\$0.30	\$4.17	\$17.80	\$22.28
5 MAINTENANCE	LINE 1 X WP 8.0 - ACF FACTOR	\$0.14	\$2.62	\$34.70	\$37.46
6 ADMINISTRATION	LINE 1 X WP 8.0 - ACF FACTOR	\$0.23	\$4.37	\$29.72	\$34.32
7 OTHER TAX	LINE 1 X WP 8.0 - ACF FACTOR	<u>\$0.09</u>	<u>\$1.78</u>	<u>\$12.12</u>	<u>\$14.00</u>
8 ANNUAL DIRECT COST	SUM (LINE 2 THRU LINE 7)	\$1.37	\$23.67	\$174.01	\$199.06
9 WEIGHTED UNIT INVESTMENT	LINE 8 x WP 8.0, PG 1, LINE 26E	\$0.22	\$3.85	\$28.27	\$32.34

**PHYSICAL COLLOCATION**  
**Verizon - Maryland**  
**FCC NO. 1**

**DC POWER - LESS THAN OR EQUAL TO 60 AMPS**

LINE NO.	A ITEM	B SOURCE	C METRO	D URBAN	E SUBURBAN	F RURAL
	<b>Microprocessor Plant (BUSS BAR)</b>					
1	AMP	Engineering	5,000	2,600	2,600	600
2	Material	Engineering	\$27,154	\$23,879	\$23,879	\$18,349
3	Unit Investment Per AMP	(L2 / L1)	\$5.43	\$9.18	\$9.18	\$30.58
4	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
5	Statewide Unit Investment Per AMP		\$11.47	\$0.96	\$4.74	\$1.56
	<b>Rectifiers</b>					
6	Quantity	Engineering	6	6	6	7
7	AMPS per unit	Engineering	400	200	200	50
8	Tot. AMPS	(L6 * L7)	2,400	1,200	1,200	350
9	Utilization	(L6-1) / L6)	83.33%	83.33%	83.33%	85.71%
10	Material	Engineering	\$55,502	\$42,046	\$42,046	\$15,900
11	Total Investment	(L10 / L9)	\$66,602	\$50,455	\$50,455	\$18,550
12	Unit Investment Per AMP	(L11 / L8)	\$27.75	\$42.05	\$42.05	\$53.00
13	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
14	Statewide Unit Investment Per AMP		\$41.03	\$4.89	\$21.70	\$7.30
	<b>Batteries</b>					
15	Strings	Engineering	3	3	3	2
16	AMPS per String	Engineering	688	310	310	310
17	Tot. AMPS	(L15 * L16)	2,064	930	930	620
18	Total Investment	Engineering	\$80,952	\$34,965	\$34,965	\$23,310
19	Unit Investment Per AMP	(L18 / L17)	\$39.22	\$37.60	\$37.60	\$37.60
20	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
21	Statewide Unit Investment Per AMP		\$37.88	\$6.91	\$19.41	\$6.38
	<b>Automatic Breaker</b>					
22	AMP per Breaker	Engineering	1,600	1,200	800	400
23	Total Investment	Engineering	\$50,000	\$40,000	\$35,000	\$20,000
24	Unit Investment Per AMP	(L23 / L22)	\$31.25	\$33.33	\$43.75	\$50.00
25	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
26	Statewide Unit Investment Per AMP		\$37.03	\$5.51	\$17.21	\$7.43
	<b>Power Distribution Service Cabinet</b>					
27	Amps	Engineering	1,600	800	400	400
28	Material	Engineering	\$13,976	\$7,788	\$5,677	\$3,467
29	Unit Investment Per AMP	(L28 / L27)	\$8.74	\$9.74	\$14.19	\$8.67
30	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
31	Statewide Unit Investment Per AMP		\$10.17	\$1.54	\$5.03	\$2.41
	<b>Emergency engine/turbine (auto start)</b>					
32	AMP Capacity	Engineering	2,605	1,736	1,111	434
33	Utilization	Engineering	70%	70%	70%	70%
34	Utilized AMPS	(L32 * L33)	1,824	1,215	778	304
35	Emerg. Engine Invest.	Engineering	\$130,765	\$78,249	\$53,871	\$41,874
36	Conduit/Emer Lights	Engineering	\$45,629	\$30,487	\$23,332	\$11,810
37	Total Investment	(L35 + L36)	\$176,394	\$108,736	\$77,203	\$53,684
38	Unit Investment Per AMP	(L37 / L34)	\$96.73	\$89.48	\$99.27	\$176.71
39	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
40	Statewide Unit Investment Per AMP		\$104.43	\$17.05	\$48.19	\$16.86
	<b>Battery Distribution Fuse Bay</b>					
41	AMP Capacity	Engineering	800	800	800	800
42	Material	Engineering	\$5,355	\$5,355	\$5,355	\$5,355
43	Unit Investment Per AMP	(L42 / L41)	\$6.69	\$6.69	\$6.69	\$6.69
44	Statewide Weighting	WP 8.0, Col E, Lns 27-30	0.1763	0.5162	0.1698	0.1377
45	Statewide Unit Investment Per AMP		\$6.69	\$1.18	\$3.46	\$1.14
	<b>Total Unit Investment - (Less than or Equal to 60 AMP's) - Sum Lines (5C+14C+21C+28C+31C+40C+45C)</b>					
46			\$248.71			

**PHYSICAL COLLOCATION**  
**Verizon - Maryland**  
**FCC - 1**

**DC POWER - LESS THAN OR EQUAL TO 60 AMPS**

<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b><u>ITEM</u></b>	<b><u>SOURCE</u></b>	<b><u>LAND</u></b>	<b><u>BLDG</u></b>	<b><u>SWITCH EQPT.</u></b>	<b><u>TOTAL INVEST</u></b>
1 TOTAL POWER PLANT UNIT INVESTMENT	WP 3.1, PG 3, LINE 10	-	-	\$248.71	\$248.71
2 EF&I FACTOR - FRC 377C	WP 8.0, PG 1, LINE 24E	-	-	2.7852	2.7852
3 INSTALLED INVESTMENT (NRC)	LINE 1 x LINE 2	-	-	\$692.71	\$692.71
4 UTILIZATION FACTOR	ENGINEERING	-	-	1.0000	1.0000
5 TOTAL IN-PLACE INVESTMENT	LINE 3 x LINE 4	-	-	\$692.71	\$692.71
6 LAND INVESTMENT FACTOR	WP 8.0, PG 1, LINE 22E	0.0078	-	-	0.0078
7 BUILDING INVESTMENT FACTOR	WP 8.0, PG 1, LINE 23E	-	0.1470	-	0.1470
8 LAND INVESTMENT	LINE 5E x LINE 6C	\$5.40	-	-	\$5.40
9 BUILDING INVESTMENT	LINE 5E x LINE 7D	-	\$101.82	-	\$101.82
10 TOTAL UNIT INVESTMENT	LINE 5E + LINE 8C + LINE 9D	\$5.40	\$101.82	\$692.71	\$799.93
11 WEIGHTED UNIT INVESTMENT	LINE 10 x WP 8.0, PG 1, LINE 26E	\$0.88	\$16.54	\$112.53	\$129.95